

REMARKS

By this amendment, claim 1 has been cancelled, claims 2-9, 19 and 21 have been amended, and claims 23-26 have been added. Thus, claims 2-11 and 14-26 are now active in the application. Reexamination and reconsideration of the application are respectfully requested.

It is noted that two minor corrections have been made to the substitute specification, at pages 2 and 9 thereof, in order to correct typographical errors.

Next, in items 2-32 on pages 2-15 of the Office Action: (1) Claims 1 and 9 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima Takeshi (JP 2004/027969; hereinafter "Takeshi") in view of Sintz et al. (U.S. 2,702,219; newly cited); (2) Claims 1 and 9, as well as claims 2-6 and 14-22 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshi in view of Sintz and further in view of Thompson (U.S. 4,599,935; newly cited) or Klotz et al. (U.S. 5,860,395; newly cited) or Ellermann et al. (U.S. 4,599,935; newly cited) or Nigro et al. (U.S. 6,112,715; newly cited); (3) Claim 7 is now rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshi in view of Sintz and further in view of Helt (U.S. 6,282,910); and (4) Claim 8 is now rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshi in view of Sintz and further in view of Numoto et al. (U.S. 6,082,132). These rejections are respectfully traversed in part and, in any event, are believed moot in view of the cancellation of claim 1 and the amendments presented to claims 2-9 and 14-22, for the following reasons.

Independent claim 1 has been cancelled, and independent claim 9 has been amended to more clearly set forth the configuration of the outer circumferential surface 150 of the piston 140.

Specifically, claim 9 now requires that a piston hole 141 is formed diametrically through the piston 140; that opposite ends of the piston pin hole 141 open into piston pin recesses formed in the outer circumferential surface 150 of the piston 140 at diametrically opposite locations of the piston 140 (see Figs. 2-4); that the piston pin 142 is accommodated in the piston pin hole 141; and that the second pair of axial land portions 154, 155 are continuous along the first lines 147a, 147b, respectively, from the circumferential land portion 190 to the skirt surface 152 except where interrupted by the piston pin recesses formed in the outer circumferential surface 150 of the

piston 140 at the diametrically opposite locations of the piston 140, such that the second pair of axial land portions 154, 155 each includes a portion (see Figs. 2 and 3) disposed on one of the first lines 147a, 147b axially between the skirt surface 152 and a respective one of the piston pin recesses.

In the rejection, the Examiner applied the Kojima Takeshi (“Kojima”) reference for disclosing a hermetic compressor, but recognized that Kojima does not disclose an undercut configured in a manner set forth in the claims. As such, the Examiner cited the Sintz et al. patent (U.S. 2,702,219) for its disclosure of oil collecting channels or recesses (undercuts) 5 formed in the piston 1. In item 10 on pages 8 and 9 of the Office Action, the Examiner explained in detail the manner in which the Sintz et al. reference is being interpreted to read upon the claim language of previous claim 9, with reference to the annotated figures shown on page 7 of the Office Action.

As noted in the paragraph spanning pages 8 and 9 of the Office Action, in order to enable the Examiner to read the previous claim 9 language on the Sintz et al. configuration, the Examiner noted “that the phrase ‘FOR accommodating the piston pin’ is intended purpose/intended use language that does not distinguish the claimed apparatus from the prior art because MPEP 2114 [R-1] states: ‘MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE APPARATUS CLAIM FROM THE PRIOR ART.’”

Thus, amended claim 9 now explicitly recites that “opposite ends of said piston pin hole open into piston pin recesses formed in said outer circumferential surface of said piston at diametrically opposite locations of said piston,” and also that “said piston pin is accommodated in said piston pin hole.” Accordingly, claim 9 now clearly positively, structurally recites the locations of the recesses at opposite ends of the piston pin hole 141, and that the piston pin 142 is accommodated in the piston pin hole 141. As such, the claim 9 language is clearly no longer amenable to the type of “intended-use” interpretation applied in the last Office Action.

With this in mind, it is noted that Figs. 1 and 2 of Sintz et al. clearly show that the only land portions provided on the outer circumferential surface of the piston along “first lines” (i.e.

the axial lines extending through the axis of the piston pin 2) are the portions of the circumferential land provided at the top of the piston. Accordingly, the Sintz et al. patent clearly does not disclose or suggest the claimed second pair of axial land portion that are “continuous along the first lines, respectively, from the circumferential land portion to the skirt surface except where interrupted by said piston pin recesses formed in said outer circumferential surface of the piston at the diametrically opposite locations of the piston, such that said second pair of axial land portions each includes a portion disposed on one of said first lines axially between said skirt surface and a respective one of said piston pin recesses,” as now explicitly required by claim 9.

This feature of the present invention is discussed in the present specification as being important to provide stability to the piston to overcome the concerns relating to the prior art piston as described in the “Background Art” section of the present specification.

The Examiner cited the Thompson, Klotz, Ellermann et al., Nigro et al., Helt, and Numoto et al. references for teaching other features of the present invention, but these additional references clearly provide no teaching or suggestion that would have obviated the above-discussed shortcomings of the Kojima and Sintz et al. references. Therefore, it is respectfully submitted that amended independent claim 9, as well as claims 2-8 and 14-26 which depend therefrom, are clearly allowable over the prior art of record.

The Examiner’s attention is also directed to the dependent claims which set forth additional features of the present invention and further define the invention over the prior art. For example, new dependent claim 23 specifies that the second pair of axial land portions 154, 155 are each formed so as to include at least one portion that extends axially continuously from the circumferential land portion 190 to the skirt surface 152 (as illustrated in Fig. 3). Claim 24 specifies that, as shown in Fig. 3, the at least one undercut 153 comprises plural undercuts, and each of the undercuts 153 has a shape that, in a direction from the skirt surface (left end in Fig. 3) toward the circumferential land portion 190 (right end in Fig. 3), first widens circumferentially and then narrows circumferentially. It is noted that, in the Sintz et al. patent, the oil collecting channels 5 are specifically provided with a wider bottom end for collecting oil, and a narrower top

end so as to increase the pressure of the oil as it moves toward the passages 6 (see Fig. 1 and column 2, lines 25-30 of Sintz et al.). Claim 25 sets forth features of the present invention previously set forth in the last two paragraphs of independent claim 1.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975, with the EXCEPTION of deficiencies in fees for multiple dependent claims in new applications.

Respectfully submitted,

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